

LNP* Thermocomp* Compound RF003ES

Americas: COMMERCIAL

Also known as: THERMOCOMP RF-1003 EM HSBK8-115
Product Reorder Name: RF003ES

LNP* Thermocomp* RF003ES is a Nylon 6/6 base resin containing Glass Fiber. Characteristics are: Easy Molding and Heat Stabilized.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	114	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	114	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D 638
Tensile Modulus, 50 mm/min	5940	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	174	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	174	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4740	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	115	MPa	ISO 527
Tensile Stress, break, 5 mm/min	115	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.2	%	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Modulus, 1 mm/min	5960	MPa	ISO 527
Flexural Stress	128	MPa	ISO 178
Flexural Modulus, 2 mm/min	4140	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	489	J/m	ASTM D 4812
Izod Impact, notched, 23°C	32	J/m	ASTM D 256
Multiaxial Impact	1	J	ISO 6603
Instrumented Impact Total Energy, 23°C	2	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	29	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m ²	ISO 180/1A
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	247	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	221	°C	ASTM D 648
CTE, -30°C to 30°C, flow	4.2E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	8.2E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	240	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Density	1.26	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	1.1	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.7 - 1	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1 - 3	%	ASTM D 955
Density	1.25	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.6	%	ISO 62

Source GMD, last updated:11/26/2008

Parameter	Value	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15 - 0.25	%
Melt Temperature	280 - 305	°C
Front - Zone 3 Temperature	295 - 305	°C
Middle - Zone 2 Temperature	280 - 295	°C
Rear - Zone 1 Temperature	265 - 275	°C
Mold Temperature	95 - 110	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

Source GMD, last updated:11/26/2008

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

Disclaimer : THE MATERIALS AND PRODUCTS OF THE BUSINESSES MAKING UP THE SABIC INNOVATIVE PLASTICS COMPANY, ITS SUBSIDIARIES AND AFFILIATES ("SABIC IP"), ARE SOLD SUBJECT TO SABIC IP' S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SABIC IP MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (I) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (II) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SABIC IP MATERIALS, PRODUCTS, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SABIC IP' S STANDARD CONDITIONS OF SALE, SABIC IP AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS OR PRODUCTS DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of SABIC IP' s materials, products, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating SABIC IP materials or products will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of SABIC IP' s Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by SABIC IP. No statement contained herein concerning a possible or suggested use of any material, product or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product or design in the infringement of any patent or other intellectual property right

* LNP is a trademark of the SABIC Innovative Plastics Company

* Thermocomp is a trademark of the SABIC Innovative Plastics Company